

CENTRAL OFFICE EQUALIZER (EQL), 628045

GENERAL DESCRIPTION

CONTENTS	PAGE
1. GENERAL	1
2. DESCRIPTION	1
3. FUNCTIONAL OPERATION (FIG. 1)	1
4. OPTIONS	1
5. TECHNICAL SUMMARY	2
6. REPLACEABLE PARTS	2
7. REFERENCES	2

1. GENERAL

1.01 This Section provides a general description of the ITT D448 central office equalizer (EQL), 628045, to the functional block diagram level.

1.02 This Section has been reissued to make corrections to Para. 2.01 and add information on the 19-inch multiplex shelf.

1.03 The EQL compensates for the office cabling between the D448 multiplex terminal and the office repeater bay or cross-connect panels. The units are designed for use with ABAM cable or equivalent. The units can be used with T1C (Modes 1 and 2) or T1 (Mode 3) signals.

2. DESCRIPTION

2.01 The EQL mounts on the rear of the D448 multiplex shelf. The 23-inch shelf is equipped with two units for Mode 3 operation; one on connector J7C (Digroup A, T1) and one on connector J8C (Digroup B, T1). The 19-inch shelf is equipped with two units for Mode 3 operation; one on connector J11C (Digroup A, T1) and one on connector J12C (Digroup B, T1). Both units are 628045-0 (for 0 to 133 feet). If the terminal is to be operated in Modes 1 or 2, one unit must be mounted on connector J5C (T1C) of the 23-inch shelf or connector J9C of the 19-inch shelf. The unit mounts over wire-wrap pins on the appropriate connector and is securely affixed to the shelf with two screws. Replacement and installation procedures for the unit are provided in Sections ITTR-18-431, ITTR-18-432, or ITTR-18-433, depending on the mode in which the terminal is being operated.

2.02 The EQL is available in five groups. The difference in the groups is the length of cable for which a unit will provide compensation. The groups are listed in Table A.

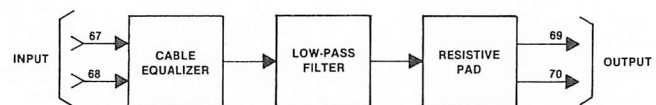
TABLE A

CATALOG NO.	MNEMONIC	CABLE LENGTH (IN FT)
628045-0	EQL1	0 to 133
628045-1	EQL2	134 to 267
628045-2	EQL3	268 to 400
628045-3	EQL4	401 to 533
628045-4	EQL5	534 to 655

2.03 The EQL consists of an epoxy-glass printed circuit board (PCB) and associated circuit components. The unit part number and issue letter, along with its applicable cable length, are stamped on the component side of the PCB. Printed circuit wiring is etched on both sides of the PCB. Unit inputs and outputs terminate in gold-plated contacts which mate with the connector on the backplane of the multiplex shelf.

3. FUNCTIONAL OPERATION (FIG. 1)

3.01 The EQL is composed of three sections: the cable equalizer, the low-pass filter, and the resistive pad. The cable equalizer approximates the inverse characteristic of the cable in the range 100 kHz to 3 MHz. The low-pass filter rolls off the high frequencies above 3 MHz at a 3-dB-per-octave rate. The resistive pad attenuates the $\pm 6V$ output of the line interface (LI-) unit by a factor 6 dB - L (where L is dependent on the cabling loss between the multiplex shelf and the span termination equipment).



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Fig. 1—EQL, 628045, Functional Block Diagram

4. OPTIONS

4.01 This unit has no field-selectable options.

5. TECHNICAL SUMMARY

- 5.01 A summary of technical specifications for the unit is given in Table B.

TABLE B

ITEM	SPECIFICATION
DIMENSIONS	
Height	2.5 in. (6.4 cm)
Width	0.5 in. (1.3 cm)
Depth	0.9 in. (2.3 cm)
WEIGHT	0.1 lb (0.1 kg)

6. REPLACEABLE PARTS

- 6.01 This unit has no field-replaceable parts.

7. REFERENCES

- 7.01 Engineering drawing No. 628045-000 was used in the preparation of this Section.
- 7.02 Related information on the EQL may be found in the ITTR Sections referenced in Table C.

TABLE C

TITLE	SECTION NO.
Mode 1 Common Equipment — Installation and Pretest	ITTR-18-431
Mode 2 Common Equipment — Installation and Pretest	ITTR-18-432
Mode 3 Common Equipment — Installation and Pretest	ITTR-18-433